

Relationship among compassion satisfaction, burnout and traumatic stress with the patient safety*

Relação entre satisfação por compaixão, burnout e estresse traumático com a segurança do paciente

Relación entre satisfacción por compasión, burnout y estrés traumático con la seguridad del paciente

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ABSTRACT

Objective: to analyze the relationship among compassion satisfaction, burnout, and secondary traumatic stress with the patient safety culture. **Method:** cross-sectional study with nurses (n = 201) from hospitals in Portugal. The Professional quality scale and the three sections of Hospital survey on patient safety culture were used to data collection. Correlation and regressions tests were implemented. **Results:** compassion satisfaction was positively related to four of the five patient safety culture dimensions and with the patient safety grade, while burnout had a negative relationship with all the dimensions and with the patient safety grade and secondary traumatic stress had a negative relationship with three patient safety culture dimensions. **Conclusions:** measures aimed at increasing compassion satisfaction and decreasing burnout and secondary traumatic stress should be implemented to improve the quality of professional life and patient safety.

Descriptors: Compassion fatigue; Stress disorders, traumatic; Burnout, professional; Patient safety; Nurses

RESUMO

Objetivo: analisar a relação entre satisfação por compaixão, burnout e estresse traumático secundário com a cultura de segurança do paciente. **Método:** estudo transversal com enfermeiros (n = 201) de hospitais de Portugal. Para a coleta de dados, utilizou-se a Professional quality scale e três seções do Hospital survey on patient safety culture. Testes de correlação e de regressão foram implementados. **Resultados:** a satisfação por compaixão foi positivamente relacionada com quatro

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das cinco dimensões da cultura de segurança do paciente e com o grau de segurança do paciente, enquanto o burnout teve relação negativa com todas as dimensões e com o grau de segurança do paciente e o estresse traumático secundário teve relação negativa com três dimensões. **Conclusões:** medidas que visem aumentar a satisfação por compaixão e diminuir o burnout e o estresse traumático secundário devem ser implementadas visando melhorar a qualidade de vida profissional e a segurança do paciente.

Descritores: Fadiga por compaixão; Transtornos de estresse traumático; Esgotamento profissional; Segurança do paciente; Enfermeiras e enfermeiros

RESUMEN

Objetivo: analizar la relación entre satisfacción por compasión, burnout y estrés traumático secundario con la cultura de seguridad del paciente. **Método:** estudio transversal con enfermeras (n = 201) de hospitales de Portugal. Para la recopilación de datos se utilizaron la Professional quality scale y tres secciones de la Hospital survey on patient safety culture. Se implementaron pruebas de correlación y regresión. **Resultados:** la satisfacción por compasión se relacionó positivamente con cuatro de las cinco dimensiones de cultura de seguridad del paciente y con el grado de seguridad, mientras que burnout tuvo una relación negativa con todas las dimensiones y con el grado de seguridad y estrés traumático secundario tuvo una relación negativa con tres dimensiones. **Conclusiones:** se deben implementar medidas destinadas a aumentar la satisfacción por compasión y disminuir el burnout y el estrés traumático secundario para mejorar la calidad de vida profesional y la seguridad del paciente.

Descritores: Desgaste por empatía; Trastornos de estrés traumático; Agotamiento profesional; Seguridad del paciente; Enfermeras y enfermeros

INTRODUCTION

Nurses play a key role in the hospital environment by providing direct and continuous care to patients during their hospitalization process. In this context and in view of the working conditions to which they are submitted, these workers are exposed to physical and psychological burdens that can interfere with their health and well-being and, consequently, in the quality of care provided.¹ When it comes to psychological burdens, nurses experience pleasure and suffering every day when dealing with life and death, with health and illness, with serious and complex situations, as well as with organizational issues that can generate stress, conflicts, anxiety and demotivation.²

Considering the foregoing, nurses can develop positive and negative feelings towards their work. In this connection, supported by the duality between happiness and pain that emerges at work, Beth Stamm presented the theoretical model that she named as Professional Quality of Life, which refers to the quality that professionals feel in relation to their work and states that positive and negative aspects of the job of the person influence his or her Professional Quality of Life, with Professional Quality of Life incorporating two aspects, the positive: compassion satisfaction and the negative: compassion fatigue.³

In this model, compassion satisfaction is the positive pole of Professional Quality of Life and is related

to the pleasure the worker feels from being able to perform his/her job well. On the other hand, compassion fatigue is the negative pole and is divided into two dimensions. The first concerns feelings, such as physical and emotional exhaustion, frustration, anger, and depression typical of burnout, which is associated with feelings of hopelessness and difficulties in dealing with work or developing work effectively. The second is secondary traumatic stress, which is related to secondary exposure to extreme and traumatic stressful events at work, relating to a negative feeling motivated by fear and work-related trauma.³

In the reflection that nurses are exposed to compassion satisfaction, burnout and secondary traumatic stress and are key professionals for the provision of quality care, we assume that these professional quality of life aspects can interfere with their professional performance and relate to patient safety and to the patient safety culture that is developed in the health organization.

The patient safety culture is reflected in the behavior of members of an organization and on their shared values and beliefs that refers on how they prioritize patient safety. A strengthened patient safety culture is characterized by valuing teamwork, by the commitment of the organization's leaders to the challenges of providing safe health care and by adoption of a proactive posture of these leaders in the face of errors, which is based on open communication between professionals and the encouragement of notification of patient safety incidents that provide effective organizational learning.⁴

In view of its importance for the quality of health services, the patient safety culture assessment has been widely implemented with a view to identifying strengths and weaknesses, thereby allowing the development of action plans and strategies aimed to improve patient safety in organizations.⁵⁻⁸

Nurses have a crucial role in strengthening and implementing patient safety culture, since they work in virtually all units of the health organization, promoting clinic management and patient care, as well as articulating care with other team members. Therefore, these professionals are actively involved in safety policies, and it is necessary that they are well physically and mentally to perform care safely and foster patient safety culture.

When it comes to compassion fatigue, literature reviews already point to the negative impact of burnout on nursing professionals in relation to the quality of care and patient safety.⁹⁻¹⁰ Nevertheless, as far as we know, there are still few studies that relate the professional quality of life of nurses in its three components (compassion satisfaction, burnout, and secondary traumatic stress) with the patient safety culture in health services.

Therefore, given the characteristics of compassion satisfaction, burnout and secondary traumatic stress and their implications for workers, organizations and patients, our study had the following research question: What is the relationship among compassion satisfaction, burnout, and secondary traumatic stress in Portuguese nurses of the hospital context with patient safety

culture? And its aims were: to analyze the relationship among compassion satisfaction, burnout, and secondary traumatic stress in Portuguese nurses in the hospital context with patient safety culture and estimate the influence of compassion satisfaction, burnout, and secondary traumatic stress on patient safety culture.

METHODS

This is a quantitative and cross-sectional study using self-responded questionnaires. Participants were nurses of the hospital context (n = 201) from hospitals in northern Portugal. Regarding inclusion criteria, it was used: being a nurse, working in the hospital context and providing direct care to patients. Sampling was performed using the non-probabilistic sampling technique, through network sampling motivation.

The study was approved by the Ethics Committee of the Porto Nursing School, Portugal, according to Annex 4 to the minute nº 26/2018. It was complied with all ethical criteria for research with human beings, with informed consent being requested from nurses for their integration in the study and ensured anonymity and confidentiality of information. After the approval of the study, the researchers contacted nurses who work in the hospital context, thereby inviting them to take part in the research and asking them to indicate other colleagues who could respond it, according to the inclusion criteria.

Data collection instruments were made available to participants in two ways, printed on paper or online through a form created on Google Forms. At the

end of the data collection that covered the period from January/2019 to February/2019, 164 nurses responded via paper and all instruments were considered eligible to be analyzed. The online data collection consisted of 45 nurses, eight of whom were excluded because they were primary care workers or from contexts outside the hospital, thereby remaining 37 as eligible for analysis, bringing the total of 201 participants.

It was used the Professional Quality Scale 5 (ProQOL 5),³ translated and validated for the Portuguese context.¹¹ ProQOL 5 has 30 questions and addresses the compassion satisfaction and burnout subscales and secondary traumatic stress. Through this instrument, professionals respond the frequency with which they experienced, in the last month, some situations or feelings. Each ProQOL component is measured from ten items that allows the perception of the participant to be assessed through a 5-point scale that varies from 1 (Never) to 5 (Very often). The ProQOL 5 fidelity for this study was tested from the Cronbach's alpha coefficient, reaching values of 0.87 for compassion satisfaction, 0.73 for burnout and 0.84 for secondary traumatic stress.

It was employed a cutting from the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire from the Agency for Healthcare Research and Quality,¹² which was translated and validated for Portugal.¹³ It was used the **Section A** of the questionnaire, this section assesses the patient safety culture in the Work Area / Unit and includes 18 questions distributed in 5 dimensions: 1.

Teamwork Within Units (TW): Staff support each other, treat each other with respect, and work together as a team; 2. Overall Perceptions of Patient Safety (OPPS): Procedures and systems are good at preventing errors and there is a lack of patient safety problems; 3. Nonpunitive Response to Error (NRE): Staff feel that their mistakes and event reports are not held against them and that mistakes are not kept in their personnel file; 4 Staffing: There are enough staff to handle the workload and work hours are appropriate to provide the best care for patients; 5. Organizational Learning-Continuous Improvement (OLCI): Mistakes have led to positive changes and changes are evaluated for effectiveness.^{12:3-4} Each dimension is assessed using a 5-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The Cronbach's Alpha for the Section A was 0.82. In addition, it was used the **Section E**, which refers to the patient safety grade, which varies in 5 points (Excellent; Very Good; Acceptable; Poor and Failing) and the **Section G**, which refers to the number of events reported in the past 12 months, which varies from no reported event to 21 or more events.

The data were organized in a Microsoft® Office Excel spreadsheet. It was performed the Pearson's Linear Correlation test to perform the correlation among the five dimensions of patient safety culture and compassion satisfaction, burnout, and secondary traumatic stress and the Spearman's Correlation to estimate the correlation between the grade of patient safety and the number of events reported in the last 12 months, as well as compassion satisfaction, burnout, and secondary

traumatic stress. It was used the Statistical Package for the Social Sciences program, version 24, to perform these tests.

It was used the Structural Equation Modeling to estimate the variation of dependent variables (patient safety culture dimensions) to the detriment of each of the professional quality of life components, adopted as the independent variables (compassion satisfaction, burnout, and secondary traumatic stress). Accordingly, through the multiple regressions implemented by Structural Equation Modeling, we measured the estimates, the standard errors, and the significance of the variation of the patient safety culture dimensions to the detriment of compassion satisfaction, burnout, and secondary traumatic stress. These analyzes were carried out through the Lavaan package in the R Program, v. 3.3.3. The level of significance adopted in the tests was 5%.

RESULTS

The sample consisted of 201 nurses. The participants were mostly female (n = 164, 81.8%), aged ≤ 36 years (n = 110, 54.7%), Bachelor of Nursing (n = 137, 68.2%), with professional experience ≤ 13 years (n = 107, 53.2%) and seniority in the service of ≤ 9 years (n = 108, 53.7%), worked in a hospital center (n = 165, 82.1%) with permanent employment (n = 182, 90.5%), rotating work shifts (n = 170, 84.6%), with weekly workload ≤ 35 hours (n = 138, 68.7%). The most prevalent hospital units were emergency (n = 44, 21.9%), followed by pediatrics (n = 31, 15.4%) and surgery (n = 30, 14.9%). Table 1

shows a summary of the data obtained from the characterization of nurses.

Table 1: Sample sociodemographic characterization, Porto, Portugal, 2021. N=201

Variables	n	(%)
Age group		
≤ 36 years old	110	(54.7)
≥ 37 years old	88	(43.8)
Missing	3	(1.5)
Gender		
Female	164	(81.8)
Male	36	(18.2)
Missing	1	(0.5)
Academic qualifications		
Graduation	137	(68.2)
Specialization	36	(17.9)
Master's	25	(12.4)
Doctorate	3	(1.5)
Work institution		
University Hospital Center	111	(55.2)
Hospital Center	54	(26.9)
Hospital	14	(7.0)
Institute	7	(3.5)
Other	2	(1.0)
Workplace/Work Unit		
Emergency Service	44	(21.9)
Other*	44	(21.9)
Pediatrics	31	(15.4)
Surgical Clinic	30	(14.9)
Medicine Clinic	18	(9.0)
Obstetrics	18	(9.0)
Operating room	8	(4.0)
Intermediate care units	8	(4.0)
Type of employment		
Permanent	182	(90.5)
Temporary	17	(8.5)
Missing	2	(1.0)
Professional experience		
≤13 years old	107	(53.2)
≥14 years old	94	(46.8)
Experience in the hospital		
≤ 9 years old	108	(53.7)
≥10 years	92	(45.8)
Missing	1	(0.5)
Weekly working hours		
≤35 hours	138	(68.7)
≥36 hours	56	(27.9)
Missing	7	(3.5)

Source: Nurses of the hospital context (n=201), Porto, Portugal (2019). *Workplaces in the "Other" include units such as: external consultation, dermatology, hemodynamics, gastroenterology, gynecology, hematology, nephrology, neonatology, oncology, orthopedics, palliative care, pulmonology, and psychiatrist.

The correlations are shown in Table 2, where it is noted that all patient safety culture dimensions, except for nonpunitive response to error, presented positive and significant correlations ($p < 0.001$) with compassion satisfaction, with the organizational learning-continuous improvement having the strongest correlation ($r = 0.437$), followed by overall perceptions of patient safety ($r = 0.324$). Burnout presented significant ($p < 0.001$) and negative correlations with all patient safety culture dimensions, the strongest being related to staffing ($r = -0.414$) and the overall perceptions of patient safety ($r = -0.392$). Secondary traumatic stress presented significant negative correlations with three of the five

dimensions, with $p < 0.001$ for the Staffing and Nonpunitive Response to Error dimensions with the correlation index (r) of -0.275 and -0.240 , respectively, and $p < 0.05$ for Overall Perceptions of Patient Safety, with $r = -0.152$.

The patient safety grade was positively correlated with compassion satisfaction ($p < 0.001$, $r = 0.388$) and negatively correlated with burnout ($p < 0.001$, $r = -0.394$), but there was no significant correlation with secondary traumatic stress. The number of events reported in the last 12 months did not present a significant correlation with the professional quality of life dimensions (Table 2).

Table 2. Correlations among the Patient Safety Culture dimensions, Patient Safety Grade and Number of Events Reported with Compassion Satisfaction, Burnout and Secondary Traumatic Stress. Porto, Portugal, 2021

Variables	Compassion Satisfaction	Burnout	Secondary Traumatic Stress
TW	0.313**	-0.256**	-0.050
OPPS	0.324**	-0.392**	-0.152*
NRE	0.011	-0.197**	-0.240**
Staffing	0.228**	-0.414**	-0.275**
OLC	0.437**	-0.370**	0.032
Patient Safety Grade	0.388**	-0.394**	0.101
Number of Events Reported in the last 12 months	0.022	-0.006	-0.032

Source: Nurses of the hospital context ($n=201$), Porto, Portugal (2019). TW: Teamwork Within Units, OPPS: Overall Perceptions of Patient Safety, NRE: Nonpunitive Response to Error, OLCI: Organizational Learning—Continuous Improvement. ** Significant at the 0.01 ($p \leq 0.01$) * Significant at the 0.05 ($p \leq 0.05$).

Compassion satisfaction positively influenced four of the five patient safety culture dimensions. Since the compassion satisfaction burdens as a predictor were higher for the staffing, organizational Learning-Continuous Improvement and Overall Perceptions of Patient Safety dimensions, with

estimates of 1.173, 1.117 and 1.009, respectively. Compassion satisfaction was not a predictor for the Nonpunitive Response to Error dimension ($p = 0.105$). Burnout influenced negatively all the patient safety culture dimensions, where the burnout burdens as a predictor were higher for the Staffing (estimate = -0.906)

and Overall Perceptions of Patient Safety (estimate = -0.802) dimensions. Secondary traumatic stress negatively influenced the patient safety culture dimensions; and, in relation to its burdens as a predictor of patient safety

culture, the estimates were significant for three of the five dimensions, with emphasis on nonpunitive response to error (estimate = -1.119, $p = 0.006$) (Table 3).

Table 3. Prediction estimates among Compassion Satisfaction, Burnout and Secondary Traumatic Stress and the Patient Safety Culture dimensions. Porto, Portugal, 2021.

Variables	Estimate	Std.Err	P(> z)	Std.all
Compassion Satisfaction				
TW	0.620	0.154	<0.001	0.382
Staffing	1.173	0.266	<0.001	0.418
NRE	0.309	0.191	0.105	0.155
OLCI	1.117	0.206	<0.001	0.576
OPPS	1.009	0.230	<0.001	0.446
Burnout				
TW	-0.393	0.111	<0.001	-0.332
Staffing	-0.906	0.195	<0.001	-0.466
NRE	-0.481	0.157	0.002	-0.316
OLCI	-0.567	0.139	<0.001	-0.405
OPPS	-0.802	0.174	<0.001	-0.479
Secondary Traumatic Stress				
TW	-0.324	0.226	0.152	-0.132
Staffing	-0.919	0.425	0.030	-0.228
NRE	-1.119	0.409	0.006	-0.353
OLCI	0.011	0.256	0.966	0.004
OPPS	-0.930	0.381	0.015	-0.271

Source: Nurses of the hospital context (n=201), Porto, Portugal (2019). Std Err: Standard Error, Std all: Standardized coefficient. TW: Teamwork Within Units, NRE: Nonpunitive Response to Error, OLCI: Organizational Learning—Continuous Improvement, OPPS: Overall Perceptions of Patient Safety.

DISCUSSION

Compassion satisfaction presented a positive and significant correlation and prediction burden with four of the patient safety culture dimensions and with the patient safety grade. Accordingly, it is perceived that compassion satisfaction is positively

related to patient safety, which suggests that nurses satisfied perceive teamwork more positively, feel that the systems and procedures performed are effective to prevent safety problems and better understand the issue of staff sizing and organizational learning.

Therefore, it is essential to have nurses satisfied for patient safety, which requires us to reflect on the factors that may be precursors of compassion satisfaction, such as: developing empathic care; acting in stressful situations, but with collegial support; developing resilience and coping mechanisms; practicing self-care; and maintaining a balance between work and personal life with social support.¹⁴ Moreover, a higher educational background, shorter shift duration and adequate support and recognition by supervisors were identified as factors related to higher compassion satisfaction.¹⁵ Additionally, programs that encourage compassionate care can be useful to increase compassion satisfaction and the quality of care. Saab et al¹⁶ reported the experience that enabled nursing leaders to learn about quality improvement and compassionate leadership. After the program, the ability of the participants to support peer-learning, manage conflicts, build trust with patients and lead in the provision of compassionate care has significantly increased.

Compassion satisfaction has also been positively related to empathic concerns and self-compassion. This indicates that nurses who are able to maintain empathic feelings towards other people in distress, with the understanding that these feelings are different from theirs, and have the ability to consciously maintain negative experiences, seem to have more positive experiences resulting from caring for others and, therefore, more compassion satisfaction.¹⁷ Accordingly, the stimulation of empathy with self-compassion may be a relevant factor for

compassion satisfaction and, consequently, for the patient safety, where the development of a compassionate self and the ability to be sensitive, non-judgmental and respectful with oneself, contribute to an approach compassionate with others.¹⁸

Interestingly, the relationship of compassion satisfaction was not significant with the nonpunitive response to error dimension. This result suggests that it is independent of the compassion satisfaction levels, which can be justified because it is a dimension that reflects the performance of supervisors and managers, and not the performance of the assistance team itself, of which it is part. Compassion satisfaction provides nurses with feelings of well-being, fulfillment, reward, accomplishment, joy, enrichment, invigoration, inspiration, revitalization, gratitude, and hope.¹⁴ Accordingly, these feelings seem to positively influence aspects of patient safety, but they would not necessarily influence the perception of the punitive culture within the work environment.

In relation to burnout, its correlation and negative prediction in relation to all patient safety culture dimensions were highlighted and with the patient safety grade. These data reveal that, by increasing the burnout levels, there is a decrease in the positive assessment in relation to patient safety. Our data also confirm the negative relationship of burnout in nursing professionals with the quality of care and patient safety found in other studies.^{9-10, 19-20}

Recent studies continue to point to the negative relationship of burnout with patient safety culture, demonstrating

that workers in situations of high demand at work and who experience burnout were more likely to negatively assess patient safety culture.²¹⁻²²

Faced with burnout symptoms, especially emotional exhaustion, and decreased commitment to work, these are negatively related to patient safety culture. In this sense, individual and organizational measures should be implemented to reduce burnout in six areas of worklife where the level of mismatch between person and work can precipitate burnout. These areas are Workload; Control; Reward; Community; Fairness; and Values. Accordingly, processes that improve the alignment of people with their worksetting have the potential for positive changes.²³

Secondary traumatic stress presented significant correlation and negative predictive burden in relation to three patient safety culture dimensions: Staffing, Nonpunitive Response to Error and Overall Perceptions of Patient Safety. These data indicate that as the nurses felt traumatic experiences at work in higher proportion, they perceived the sizing of personnel and workload worse, perceived the punitive culture in higher proportion and that the systems and procedures in the work unit were not good enough to preserve patient safety. Measures focused on managing secondary traumatic stress are essential to ensure a better quality of life for nurses and, consequently, greater safety for patients. In this way, some factors can help professionals in relation to secondary traumatic stress, such as receiving support from leaders, colleagues, relatives, and organization, experiencing a positive safety culture, as

well as having access to psychiatric support service.²⁴ Moreover, the lack of empowerment to control their practice can make it more difficult to deal with traumatic experiences at work.²⁴

However, unlike burnout, secondary traumatic stress did not present this negative relationship with the Teamwork Within Units and Organizational Learning-Continuous Improvement dimensions, and with the patient safety grade. Therefore, secondary traumatic stress does not seem to influence the perception of nurses of the work within the team where they are inserted, nor the learning process and the grade of safety perceived in the work environment.

From the analysis of the correlation strength, burnout showed stronger negative correlations with the patient's safety culture and with a greater number of safety aspects. This result can be explained based on the burnout and secondary traumatic stress characteristics. Burnout presents itself in a more progressive and continuous manner, which may lead to a decrease in the commitment of the individual to its work, a decrease in the empathic concerns with patients, besides bad thoughts, and feelings towards colleagues, himself/herself, and the selected profession.^{3,23} All of these burnout characteristics seem to negatively influence patient safety. In contrast, secondary traumatic stress has its origin in the traumatization of the individual due to the possibility of feeling empathy for the other who suffers, where the more empathic, the more chance of developing secondary traumatic stress.^{17,25} Empathy is also a responsible

resource for healthy and compassionate involvement with people^{17,25} and, therefore, an important factor to ensure patient safety. In addition, secondary traumatic stress can happen in an acute and abrupt way, also happening, in most cases, a faster recovery than burnout.²⁵ Therefore, it seems to have a minor effect on patient safety.

In view of the results, we identified that compassion satisfaction can positively influence patient safety and compassion fatigue, especially burnout, has a negative impact. Accordingly, we emphasize that strategies aimed to decrease compassion fatigue and strengthen compassion satisfaction are important to strengthen patient safety culture.

Among these strategies, mindfulness meditation stands out as studies show that has a positive impact on nurses' stress, anxiety, depression, burnout, sense of well-being and empathy.²⁶

In this direction, an intervention study designed to educate nurses about compassion fatigue, teaching methods of self-care and mindfulness implemented a series of brief audio-guided meditations to reduce levels of compassion fatigue. After the intervention, nurses reported a high level of satisfaction with acquired knowledge and the average scores indicated that the intervention was effective in improving compassion satisfaction and reducing secondary traumatic stress and burnout levels.²⁷ Another survey also with nurses adopted an evaluation design model to assess the effects of a mindful self-compassion intervention on self-compassion, compassion satisfaction, secondary

traumatic stress, and burnout. This study concluded that mindful self-compassion increased compassion satisfaction and was negatively related to burnout and secondary traumatic stress.²⁸

Furthermore, from the standpoint of individual strategies, workers can be encouraged to develop self-assessment and self-knowledge, as they are essential for recognizing changes that may be related to your mental health. Other measures include proper stress management, adopting healthier habits, sharing feelings and perceptions with the team.²⁹

Therefore, the implementation of patient safety culture policies should be held in conjunction with the policies for the health of nursing workers, especially in relation to compassion satisfaction and compassion fatigue, with emphasis on the decrease in burnout. In this sense, the National Patient Safety Foundation³⁰ points out, among its recommendations to accelerate the improvement of patient safety, the safety of workers, as well as their emotional state and well-being, since they are necessary to provide safe care.

Study limitations and future research directions

The study seems to be innovative because it considers the relationship among the three professional quality of life dimensions with patient safety culture in the Portuguese hospital context, but it was developed in a restricted sample of Portuguese nurses who work in hospitals in northern Portugal and, therefore, it can portray a specific scenario. Accordingly, the

generalization of the results should be done with caution.

Therefore, it is believed that further studies with other samples and contexts are necessary for a better exploration of this theme. Therefore, it is suggested longitudinal studies to further explore the behavior of the variables, as well as the use of other patient safety culture dimensions and the performance of qualitative studies to deepen the relationship between professional quality of life and patient safety culture.

CONCLUSIONS

The results highlighted a significant relationship between professional quality of life and patient safety culture. Compassion satisfaction was positively related to most of the patient safety culture dimensions and to the patient safety grade, while compassion fatigue was negatively related, highlighting burnout, which had a negative correlation and prediction with all dimensions and with the patient safety grade.

Accordingly, it is concluded that compassion satisfaction should be developed continuously by the worker and the organization, while measures that reduce compassion fatigue should be implemented, especially related to the prevention and relief of burnout symptoms. Therefore, it is highlighted the need to foster the promotion of the health of nursing workers as one of the pillars for the implementation and consolidation of patient safety culture.

REFERENCES

1 Seabra PRC, Lopes JMO, Calado ME, Capelas ML. A national survey of the

nurses' mental health — The case of Portugal. *Nurs. forum.* 2019;1-8. DOI: <https://doi.org/10.1111/nuf.12350>

2 Baldonado M, Mosteiro P, Queirós C, Borges E, Abreu, M. Stress no trabalho em enfermeiros: estudo comparativo Espanha/Portugal. *International Journal on Working Conditions.* 2018;15:67-80. Available from: https://ricot.com.pt/artigos/1/IJWC.15_Baldonado.et.al_p.67.80.pdf

3 Stamm BH. The concise ProQOL manual. Pocatello, ID. 2010. Available from: <https://img1.wsimg.com/blobby/go/dfc1e1a0-a1db-4456-9391-18746725179b/downloads/ProQOL%20Manual.pdf?ver=1622839353725>

4 Reis CT. Cultura de segurança em organizações de saúde. In: Sousa P, Mendes W, (org). *Segurança do Paciente: criando organizações de saúde seguras.* Rio de Janeiro: EAD/ENSP; 2019. p. 77-109. DOI: <https://doi.org/10.7476/9788575416426>

5 Reis CT, Paiva SG, Sousa P. The patient safety culture: a systematic review by characteristics of Hospital Survey on Patient Safety Culture dimensions. *Int. j. qual. health care.* 2018;30(9):660-77. DOI: <https://doi.org/10.1093/intqhc/mzy080>

6 Prieto MMN, Fonseca REP, Zem-Mascarenhas SH. Assessment of patient safety culture in Brazilian hospitals through HSOPSC: a scoping review. *Rev. bras. enferm.* 2021;74(6):e20201315. DOI: <https://doi.org/10.1590/0034-7167-2020-1315>

7 Alves DFB, Lorenzini E, Cavalho KA, Schmidt CR, Dal Pai S, Kolankiewicz ACB. Cultura de segurança do paciente na perspectiva da equipe multiprofissional: uma revisão integrativa. *Rev. Pesqui.* (Univ. Fed. Estado Rio J., Online). 2021;13:836-42. DOI:

<https://doi.org/10.9789/2175-5361.rpcfo.v13.9235>

8 Olsen E, Leonardsen ACL. Use of the Hospital Survey of Patient Safety Culture in Norwegian Hospitals: a systematic review. *Int. j. environ. res. public health* (Online). 2021;18:6518. DOI: <https://doi.org/10.3390/ijerph18126518>

9 Batalha EMSS, Melleiro MM, Borges, EMN. Burnout and its interface with patient safety. *Rev. enferm. UFPE on line.* 2019;13:e239641. DOI: <http://dx.doi.org/10.5205/1981-8963.2019.239641>

10 Rodrigues CCFM, Santos VEP, Sousa P. Patient safety and nursing: interface with stress and Burnout Syndrome. *Rev. bras. Enferm.* 2017;70(5):1083-8. DOI: <https://doi.org/10.1590/0034-7167-2016-0194>

11 Carvalho PRC. Estudo da Fadiga por Compaixão nos Cuidados paliativos em Portugal: Tradução e Adaptação Cultural da Escala "Professional Quality of Live 5" [dissertação]. Lisboa (PT): Universidade Católica; 2011. Disponível em: <https://repositorio.ucp.pt/handle/10400.14/4202>

12 Rockville W, Sorra J, Gray L, Streagle S, Famolaro T, Yount N, et al. AHRQ Hospital Survey on Patient Safety Culture: user's guide. Rockville, MD: Agency for Healthcare Research and Quality, 2016. Available from:

<https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/hospital/usersguide/hospitalusersguide.pdf>

13 Eiras M. Avaliação da Cultura de Segurança do Doente em meio hospitalar: investigação ação numa Unidade de Radioterapia [dissertação]. Lisboa (PT): Universidade Nova de Lisboa; 2011. Available from: <https://run.unl.pt/handle/10362/13667>

14 Sacco TL, Copel LC. Compassion satisfaction: A concept analysis in nursing. *Nurs. Forum.* 2018;53(1):76-83. DOI: <https://doi.org/10.1111/nuf.12213>

15 Hunsaker S, Chen HC, Maughan D, Heaston S. Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *J. nurs. scholarsh.* 2015;47(2):186-94. DOI: <https://doi.org/10.1111/jnu.12122>

16 Saab MM, Drennan J, Cornally N, Landers M, Hegarty J, Eileen Savage E, et al. Impact of a compassionate care leadership programme. *Br. j. nurs.* 2019;28(11):708-14. DOI: <https://doi.org/10.12968/bjon.2019.28.11.708>

17 Duarte J, Pinto-Gouveia J, Cruz B. Relationships between nurses' empathy, self-compassion, and dimensions of professional quality of life: a cross-sectional study. *Int. j. nurs. stud.* 2016;60:1-11. DOI: <https://doi.org/10.1016/j.ijnurstu.2016.02.015>

18. Gustin LW, Wagner L. The butterfly effect of caring - clinical nursing

- teachers' understanding of self-compassion as a source to compassionate care. *Scand. j. caring sci.* 2013;27(1):175-83. DOI: <https://doi.org/10.1111/j.1471-6712.2012.01033.x>
- 19 Halbesleben JR, Wakefield BJ, Wakefield DS, Cooper LB. Nurse burnout and patient safety outcomes nurse safety perception versus reporting behaviour. *West. j. nursing res.* 2008;(5):560-77. DOI: <https://doi.org/10.1177/0193945907311322>
- 20 Vifladt A, Simonsen BO, Lydersen S, Farup PG. The association between patient safety culture and burnout and sense of coherence: a cross-sectional study in restructured and not restructured intensive care units. *Intensive crit. care nurs.* 2016;36:26-34. DOI: <https://doi.org/10.1016/j.iccn.2016.03.004>
- 21 Carneiro AS, Dalmolin RAGL, Magalhães AMM, Magnago TSBS, Arrial TS. Occupational stress, burnout and patient safety culture among workers from critical care and non-critical care units in a hospital in Brazil. *Intensive crit. care nurs.* 2021;63:102978. DOI: <https://doi.org/10.1016/j.iccn.2020.10.2978>
22. Mansour H, Sharour LA. Results of survey on perception of patient safety culture among emergency nurses in Jordan: influence of burnout, job satisfaction, turnover intention, and workload. *J. healthc. qual. res.* 2021;26(21):00050-6. DOI: <https://doi.org/10.1016/j.jhqr.2021.05.001>
- 23 Maslach C, Leiter MP. New insights into burnout and health care: strategies for improving civility and alleviating burnout. *Med. teach.* 2017;39(2):160-3. DOI: <https://doi.org/10.1080/0142159X.2016.1248918>
- 24 Beck CT, Cusson RM, Gable RK. Secondary Traumatic Stress in NICU Nurses A Mixed-Methods Study. *Advances Neonatal Care.* 2017;17(6):478-88. DOI: <https://doi.org/10.1097/ANC.0000000000000428>
- 25 Figley CR. *Compassion fatigue: coping with secondary traumatic stress disorder in those who treat the traumatized.* New York: Brunner/Mazel; 1995.
- 26 Van der Riet P, Levett-Jones T, Aquino-Russell C. The effectiveness of mindfulness meditation for nurses and nursing students: an integrated literature review. *Nurse educ. today.* 2018;65:201-11. DOI: <https://doi.org/10.1016/j.nedt.2018.03.018>
- 27 Abernathy S, Martin R. Reducing compassion fatigue with self-care and mindfulness. *Nurs. crit. care.* 2019;14(5):38-44. DOI: <https://doi.org/10.1097/01.CCN.0000578852.69314.be>
- 28 Delaney MC. Caring for the caregivers: Evaluation of the effect of an eight-week pilot mindful self-compassion (MSC) training program on nurses' compassion fatigue and resilience. *PLoS ONE.* 2018;13(11):e0207261. DOI: <https://doi.org/10.1371/journal.pone.0207261>

29 Queirós C, Borges E, Teixeira A, Maio T. Estratégias de prevenção do stress, burnout e bullying no trabalho. In: Borges E (editora). Enfermagem do trabalho: Formação, investigação, estratégias de intervenção. Lisboa: Lidel - Edições Técnicas; 2018. p.139-57.

30 National Patient Safety Foundation. Free from Harm: accelerating patient safety improvement fifteen years after to err is human. Boston, MA: National Patient Safety Foundation, 2015. Available from: <http://www.ihf.org/resources/Pages/Publications/Free-from-Harm-Accelerating-Patient-Safety-Improvement.aspx>

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